

Data Ingest Activities - TRMM Ingest “Fault” Scenario

(Subsystems Involved: INS, CLS, MSS)

System	Operator
	The messages listed below are examples of possible error conditions and messages sent to the DIT. Trouble tickets are generated using the trouble ticket COTS tool.
1) SDPF sends Data Availability Notice (DAN) to Ingest (LaRC and MSFC). If the DAN is incomplete or damaged the system will automatically return a DAA indicating that an invalid DAN was received and request a retransmission.	Summaries of DAN and DAA messages can be viewed in the event log.
- If a valid DAN is received, Ingest generates a corresponding ingest request. The DIT will be notified if resources requested by the ingest request cannot be allocated.	DIT will notify the Resource Manager and a trouble ticket will be generated if the problem cannot be easily resolved.

Data Ingest Activities - TRMM

Ingest “Fault” Scenario (cont.)

System	Operator
<ul style="list-style-type: none">- Ingest generates a corresponding ingest request and stores the request on a prioritized list. A summary of the DAN contents indicating data source, number of files, and location of data is placed in the log file(s).	
<ul style="list-style-type: none">- Acknowledges the request (DAA). Network error prevents sending the DAA. If a system-tunable number of automated retransmission attempts fail, the DIT will be notified.	The DIT generates a trouble ticket
2) Ingest function schedules data ingest and performs data transfer. A failure occurs in the middle of the transfer. After a system-tunable number of retries, a DDN indicating failed transfer is sent to the data provider and DIT.	DIT attempts to identify the problem, and may either initiate a trouble ticket on a failed device or notify the Resource Manager.

Data Ingest Activities - TRMM Ingest “Fault” Scenario (cont.)

System	Operator
3) No data conversion required for SDPF Level 0 data.	
4) Ingest function extracts SDPF Level 0 metadata and checks selected metadata parameters (e.g., SFDU header information). Metadata parameter out of range. The system flags the data as out of range and notifies the QAM of the condition.	QAM provides off-line analysis of the problem and determines if the data is in error. If it is, a trouble ticket is generated after ingest of the data, and retransmission of the data may be requested.
5) Ingest function requests to store SDPF Level 0 data and metadata in the Level 0 data repository. Data repository insert fails.	DIT and DAM are notified of the failure.

Data Ingest Activities - TRMM Ingest “Fault” Scenario (cont.)

System	Operator
6) Ingest function reports status to the data provider/Ingest Tech. and to the Ingest History Log when the data storage is completed. DDN is sent to SDPF but no DDA is received. If a TBD number of automated retransmission attempts fail, the DIT will be notified.	DIT attempts to determine if DDN was received and the source of the problem (e.g., network outage). DIT generates a trouble ticket and sends to Resource Manager who may manually resolve the problem with the data provider.